

CLAIMS

1. An angular velocity sensor comprising:

an oscillating element including a drive electrode, a
5 monitor electrode and a detecting electrode; a drive circuit
having its output side connected with the drive electrode of
the oscillating element; a detecting circuit having its input
side connected with the detecting electrode of the oscillating
element; a monitor circuit having its input side connected with
10 the monitor electrode of the oscillating element; a rectifying
circuit for rectifying an output signal of the monitor circuit;
a smoothing circuit for smoothing the output signal of the
rectifying circuit to obtain a smoothed signal; and an
oscillation control circuit adapted to be fed with the output
15 signal of the monitor circuit and to have a gain controlled
with the output signal of the smoothing circuit, for inputting
its output signal to the drive circuit, wherein the smoothing
circuit includes: a first switch having an input terminal
connected with the output side of the rectifying circuit; a
20 first capacitor having its one terminal connected with an output
terminal of the first switch; a second switch having an input
terminal connected with the output terminal of the first switch
and an output terminal connected with the input side of the
oscillation control circuit; a first reference voltage
25 connected with the other terminal of the first capacitor; a

second capacitor having its one terminal connected with the output terminal of the second switch and its other terminal connected with the first reference voltage; and control signal feeding means for feeding a signal to control the ON/OFF of
5 the first switch and the second switch.

2. The angular velocity sensor of Claim 1, wherein the control signal feeding means is fed as its source signal with the output signal of the monitor circuit.

3. The angular velocity sensor of Claim 1, wherein the
10 control signal feeding means is fed as its source signal with the output signal of the drive circuit.

4. The angular velocity sensor of Claim 1, wherein the control signal feeding means is fed as its source signal with the output signal of the oscillation control circuit.

15 5. The angular velocity sensor of Claim 1, wherein the control signal feeding means is fed as its source signal with the output signal of an oscillating circuit.

6. The angular velocity sensor of Claim 1, wherein the control signal feeding means is fed as its source signal with
20 an AC signal applied from signal generating means outside of the sensor.

7. An automobile comprising: a body; a plurality of tires for supporting the body; and a brake system provided for each tire, wherein the brake system is fed with the detected output
25 from an angular velocity sensor of any of Claims 1 to 6.

8. An automobile comprising: the body; at least one seat disposed in the body; and an airbag system disposed near the seat, wherein the airbag system is fed with the detected output from an angular velocity sensor of any of Claims 1 to 6.